

THAMNOSMA PAILENSIS (RUTACEAE), NEW SPECIES

FROM THE SIERRA DE LA PAILA, COAHUILA

MEXICO

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P. Wilson (North American Flora 25:211-212. 1911) listed only two species of Thamnosma Torr. & Frem. in North America, T. texana (Gray) Torrey from Colorado and Arizona to northern Mexico; and T. montana Torrey & Frem. from Utah, Nevada, California, Arizona New Mexico, and Baja California. The taxon proposed shortly thereafter, Rutosma purpurea Wooton & Standley, Contributions U. S. Nat. Herb. 16: 143. 1913 from southern New Mexico has proved to be a race of T. texana. I. M. Johnston added two quite distinct species, T. trifoliata I. M. Johnst., Proc. Calif. Academy Sci. IV 12:1055. 1924) from Baja California and T. stanfordii I. M. Johnst., Journal of the Arnold Arboretum 24: 235 1943 from southern Coahuila. A recent research-trip in the Sierra de la Paila of southeastern Coahuila uncovered a fifth perfectly distinct species:

THAMNOSMA PAILENSIS M. C. Johnst., sp. nov. Suffrutices scopariiformes 2-4 dm alti minute pubescentes; folia simplicia 4-11 mm longa, 1-1.5 mm lata; petala 7-9 mm longa, flava; capsulae subsessiles 6 mm longae 4 mm latae.

THAMNOSMA PAILENSIS M. C. Johnst., new sp. Taprooted, broomlike, subshrubs 2-4 dm tall; stems 20-60 from root-crown, stiffly ascending with few-several strictly ascending branches, densely beset over most of the length with straight to weakly arching, spreading or usually weakly retrose translucent whitish needle-like weakly viscid (with clinging soil-particles) hairs 0.2-0.3mm long, upper stem beset with weak, blunt, gland-tipped hairs gradually replacing the needle-like hairs toward the inflorescence. Leaves linear, 4-11 mm long (progressively reduced up-stem), 1-1.5 mm wide, with pubescence like that of the stems, laterally with recurved margins, at tip blunt. Inflorescences few-flowered terminal racemes, only one flower of inflorescence coming into anthesis at a time; pedicels 1-2 mm long, not accrescent. Sepals 4, dark green, about 1.5 mm long. Petals 4, elliptic, 7-9 mm long, bright yellow or abaxially with a green-yellow tinge, more or less obtuse. Stamens 8, all more or less equilong and more or less equalling the petals, yellow. Ovary with stipe about 1 mm long. Style about 2 mm long or 6 mm long. Fruit including stipe about 6 mm long and 4 mm wide.

Only known collection: Mexico, Coahuila, Sierra de la Paila, northern slope, south-southeast of Las Coloradas, 26°6' North latitude, 101°35' West longitude, 1500-2000 meters, abundant subshrub in crevices between limestone ledges, 5 February 1983, M. C. Johnston 12751 (TEX, holotype; MEXU, isotype).

At this locality T. pailensis was associated with various monocotyledonous rosettes such as Agave lecheguilla, A. stricta, Dasyliirion wheeleri; cacti such as Opuntia bradtiana; and numerous kinds of shrubs such as Gochnatia hypoleuca, Helietta parvifolia, Randia pringlei, Mortonia, Flourensia, Leucophyllum, etc. I had seen T. pailensis on previous trips in this mountain-range though never in flower. On the basis of the old vegetative plants, the taxon could not be described previously, though it was suspected to represent a new species. The new material confirms the suspicions. It seems likely then that T. pailensis has previously escaped the notice of botanists because of its very early flowering season. With three species of Thamnosma, the Chihuahuan Desert Region thus can boast of more species of this genus than any other floristic region. A key to the American species of Thamnosma is given below.

- A. Leaflets 3 T. trifoliata
 AA. Leaflet 1 (leaves simple).
 B. Ovary-stipe about as long as ovule-bearing portion. . .
 T. montana
 BB. Ovary-stipe only about 1 mm long.
 C. Petals whitish adaxially, often whitish with purplish
 tinge abaxially; plants usually 5-10 dm tall
 T. stanfordii
 CC. Petals yellow; plants 1-4 dm tall.
 D. Petals 3-5 mm long; plants usually mostly herba-
 ceous and often in part decumbent . . . T. texana
 DD. Petals 7-9 mm long; most stems woody and erect. .
 T. pailensis

The data given on style-length in T. pailensis indicate that some styles are about 2 mm long, others 6 mm long; although unfortunately this disparity was not noticed in the field, the approximately 10 flowers available in the exsiccata were examined and showed these two lengths with no intermediates. On the other hand, the stamens were of about the same length in all the flowers. The populations should be examined in the field to test the idea that there is a bimodal distribution of style lengths and that this has some biological significance. No insect was observed to visit the flowers in the field.